Specifications: Base Units

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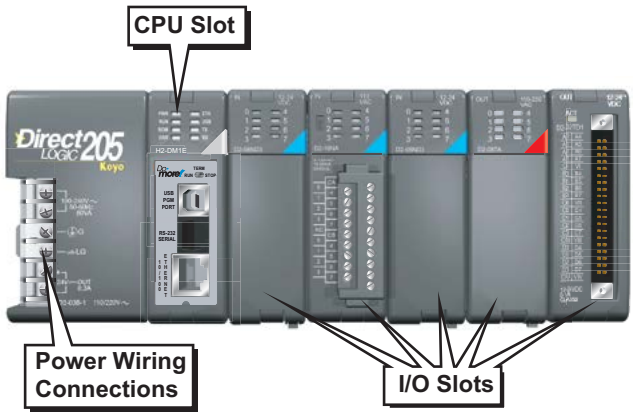
Base Unit Overview

For the Do-more H2 Series PLC there are four base sizes available: 3, 4, 6 and 9 slot. All bases include a built-in power supply and can be purchased for use with AC or DC sources.

NOTE: *The Do-more H2 Series PLC does not support local expansion, only local and Ethernet remote I/O configurations.*

Choosing a Base Type

The Do-more PLC offers 10 base configurations, four chassis sizes with different power supply options. The following diagram shows an example of a 6-slot base.



Your choice of base depends on three things:

- Number of I/O modules required
- Input power requirement (AC or DC power)
- Available power budget

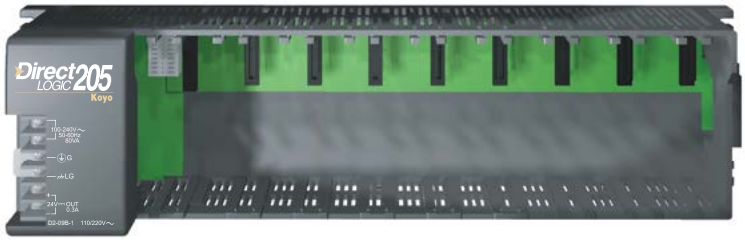
The following pages contain details and specifications on the different base options. For installation and wiring information, refer to the "Installation and Wiring" chapter of this manual.

AC Powered Base Units

D2-03B-1

D2-04B-1

D2-06B-1



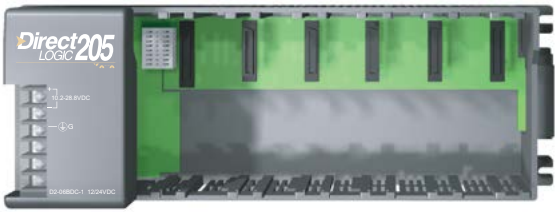
D2-09B-1

Specification	100–240 VAC Powered Bases
Input Voltage Range	100–240 VAC (+10%/ –15%) 50/60 Hz
Maximum Inrush Current	30A
Maximum Power	80VA
Voltage Withstand (dielectric)	1 minute @ 1500VAC between primary, secondary, and field ground
Insulation Resistance	> 10MΩ at 500VDC
Auxiliary 24VDC Output	20–28 VDC, less than 1V p-p 300mA max.
Fusing (internal to base power supply)	Non–replaceable 2A @ 250V slow blow fuse

24VDC Powered Base Units

D2-03BDC1-1

D2-04BDC1-1



D2-06BDC1-1

D2-09BDC1-1

Specification	12–24 VDC Powered Bases
Input Voltage Range	10.2–28.8 VDC with less than 10% ripple
Maximum Inrush Current	10A
Maximum Power	25W
Voltage Withstand (dielectric)	1 minute @ 1500VAC between primary, secondary, and field ground
Insulation Resistance	> 10MΩ at 500VDC
Auxiliary 24VDC Output	None
Fusing (internal to base power supply)	Non–replaceable 3.15 A @ 250V slow blow fuse

125VDC Powered Base Units

D2-06BDC2-1

D2-09BDC2-1

Specification	104–240 VDC Powered Bases
Input Voltage Range	104–240 VDC +10% –15%
Maximum Inrush Current	20A
Maximum Power	30W
Voltage Withstand (dielectric)	1 minute @ 1500VAC between primary, secondary, and field ground
Insulation Resistance	> 10MΩ at 500VDC
Auxiliary 24VDC Output	20–28 VDC, less than 1V p-p 300mA max.
Fusing (internal to base power supply)	Non–replaceable 2A @ 250V slow blow fuse

Power Budget

When determining the types and quantity of I/O modules you will be using, it is important to remember there is a defined amount of power available from the base power supply. The charts on the next page indicates the power supplied and used by each module. The chart below shows an example of how to calculate the power used by your particular system. These charts should make it easy for you to determine if the devices you have chosen will operate within the power budget of your system configuration. If the I/O you have chosen exceeds the maximum power available from the power supply, you may be able to resolve the problem by using remote I/O bases.

Power Budget Example

The example below shows how to calculate the power budget for the Do-more PLC system. The examples are constructed around a single 9-slot base using the devices shown. It is recommended that you construct a similar table for your Do-more PLC system. Follow the following steps to determine your power budget.

1. Using a chart similar to the one below, fill in column 2.
2. Using the tables on the next page, enter the current supplied and used by each device (columns 3 and 4). Devices which fall into the "Other" category (Row D) are devices such as the C-more Micro interface, which also have power requirements, but do not directly plug into the base.
3. Add the current used by the system devices (columns 3 and 4) starting with the CPU slot and put the total in the row labeled "Maximum Current Required" (Row E).
4. Subtract the row labeled "Maximum Current Required" (Row E), from the row labeled "Current Supplied" (Row B). Place the difference in the row labeled "Remaining Current Available" (Row F).
5. If "Maximum Current Required" is greater than "Current Supplied" in either column 3 or 4, the power budget will be exceeded. It will be unsafe to use this configuration, and you will need to restructure your I/O configuration. Note the auxiliary power supply does not need to supply all the external power. If you need more than the 300mA supplied, you can add an external 24V power supply. This will help keep you within your power budget for external power.

A	Column 1	Column 2	Column 3	Column 4
		Device Type	5VDC (mA)	External Power 24 VDC (mA)
B	CURRENT SUPPLIED			
	Base	9 slot	2,600	300
C	CURRENT REQUIRED			
	CPU SLOT	H2-DM1E	275	0
	SLOT 0	D2-16ND3-2	100	0
	SLOT 1	D2-16ND3-2	100	0
	SLOT 2	D2-16NA	100	0
	SLOT 3	D2-08NA-1	50	0
	SLOT 4	D2-16TD1-2	200	80
	SLOT 5	D2-08TA	250	0
	SLOT 6	D2-08TA	250	0
	SLOT 7			
D	OTHER			
	Operator interface	EA1-S3ML	90	0
E	Maximum Current Required		1415	80
F	Remaining Current Available		2600-1415=1185	300-80=220

Power Requirements

The charts below show the amount of power supplied by each of the base power supplies and the amount of power consumed by each module. The Power Consumed charts list how much INTERNAL power from each power source is required for the modules. Use this information when calculating the power budget for your system.

In addition to the internal power sources, bases offer a 24VDC auxiliary power supply with external power connections. This auxiliary power supply can power external devices.

Power Supplied					
Device	**5V(mA)**	**24V Auxiliary**	**Device**	**5V(mA)**	**24V Auxiliary**
Bases			**Bases**		
D2-03B-1	2600	300	D2-04BDC1-1	2600	None
D2-04B-1	2600	300	D2-06BDC1-1	2600	None
D2-06B-1	2600	300	D2-09BDC1-1	2600	None
D2-09B-1	2600	300	D2-06BDC2-1	2600	300
D2-03BDC1-1	2600	None	D2-09BDC2-1	2600	300

Power Consumed		
Device	**5V(mA)**	**24V Auxiliary**
CPUs		
H2-DM1	250	0
H2-DM1E	275	0
DC Input Modules		
D2-08ND3	50	0
D2-16ND3-2	100	0
D2-32ND3	25	0
D2-32ND3-2	25	0
AC Input Modules		
D2-08NA-1	50	0
D2-08NA-2	100	0
D2-16NA	100	0
DC Output Modules		
D2-04TD1	60	20
D2-08TD1	100	0
D2-08TD2	100	0
D2-16TD1-2	200	80
D2-16TD2-2	200	0
F2-16TD1P	70	50
F2-16TD2P	70	50
D2-32TD1	350	0
D2-32TD2	350	0

Power Consumed		
Device	**5V(mA)**	**24V Auxiliary**
AC Output Modules		
D2-08TA	250	0
F2-08TA	250	0
D2-12TA	350	0
Relay Output Modules		
D2-04TRS	250	0
D2-08TR	250	0
F2-08TR	670	0
F2-08TRS	670	0
D2-12TR	450	0
Combination In/Out Module		
D2-08CDR	200	0
Analog Modules		
F2-04AD-1	100	5
F2-04AD-2	110	5
F2-08AD-1	100	5
F2-08AD-2	100	5
F2-02DA-1	40	60 (note 1)
F2-02DA-1L	40	70 @ 12V (note 1)
F2-02DA-2	40	60
F2-02DA-2L	40	70 @ 12V
F2-02DAS-1	100	50 / channel

Power Consumed		
Device	**5V(mA)**	**24V Auxiliary**
Analog Modules (continued)		
F2-02DAS-2	100	60 / channel
F2-08DA-1	30	50 (note 1)
F2-08DA-2	60	140
F2-4AD2DA	60	80 (note 1)
F2-8AD4DA-1	35	100 (note 1)
F2-8AD4DA-2	35	80 (note 1)
F2-04RTD	90	0
F2-04THM	110	60
Specialty Modules		
H2-CTRIO [2]	400	0
H2-CTRIO2	275	0
H2-EBC100	300	0
H2-EBC-F	640	0
H2-ECOM100	300	0
H2-ECOM-F	640	0
H2-ERM(100)	320(300)	0
H2-ERM-F	450	0
H2-SERIO	80	0
H2-SERIO-4	80	0
F2-08SIM	50	0

1: Add an additional 20mA per output loop.
2: H2-CTRIO has been discontinued, use H2-CTRIO2.